JT600 User Manual

Ver 1.5

11-15-2011

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I Preface

All the content in this manual is accurate, however, with the continuous research and development of Joint Technology Co.,Ltd, we might update the operational manual from time to time.

The manual you are reading now is reflecting of present state of art of the products described therein, we have endeavored to give a description that is as complete and clear as possible in order to make it easy for you to use our products. There might be content which is not described in accurate technical expression, with the rapid technology development, we reserve the rights to incorporate technical alterations and developments without separate notice in advance.

You can refer to the latest operation manual and relative documents by visiting

Please read those simple guidelines before use, Jointech assured that the products will work properly under normal conditions, the warranty period would be 12 months from the delivery date, the warranty shall not apply to any defect, failure or damage which caused by improper maintenance, repair, alteration.

II Updates

No.	Content	Date
1	Documentation release	2010-12-22
2	Edit the working mode, Add P14,P18 command V1.1	2011-02-26
3	Edit **4.2** Operation Button and **4.3** working mode instruction V1.2	2011-04-26
4	Edit 5.1 PC based software	2011-08-05
5	Edit **4.3** working mode	2011-10-19
6	Edit 5.4 PC Setup software introduction	2011-11-24

Ⅲ Product Function

No.	Product Function
1	Data transmission mode(SMS/TCP)
2	Track by SMS/GPRS
3	Track by time interval
4	Track by Calling(reply a location short message to mobile phone)
5	Base station Location (CELL ID and LAC)
6	Two-way voice function
7	Automatic answer the call
8	Listen-in function(Voice monitoring)
9	64 Geo-fence support
10	Self Geo-fence(User defined Geo-fence)
11	Real-time power monitoring
12	GSM and GPS signal strength detecting
13	Support remote/PC setup setting
14	Low Battery alert, SOS alert, Geo-fence alert
15	Solar power charger
16	Inbuilt battery 1800mAh
17	Solar power working indication
18	flashlight function
19	Mini-USB port, cable(charging, upgrading, configuration)
20	Up to 2 months working(Timing mode)
21	Vibration detecting
22	RTC
23	Factory reset

IV Profile and Description

4.1 Profile

4.2 Operation Button

There are 4 buttons, please refer to the following details:

Button	Operation	Function	Conditions
CALL Ⅰ	Press this button for 3 sec	Call the first preset VIP number . Note: JT600 will be vibrating if you dial this number successfully.	No incoming call
	Press this button once	Answer the incoming call	When an incoming call
CALL Ⅱ	Press this button for 3 sec	Call the second preset VIP number. Note: JT600 will be vibrating if you dial this number successfully.	No incoming call
	Press this button once	Answer the coming call	When an incoming call
	Press this button twice within 3sec	Self Geo-fence ON Note: JT600 will be vibrating if you set this successfully. and there is a message which informs you the self geo-fence latitude, longitude and radius .	No incoming call. and self Geo-fence off
Power	Press this button for 3 sec	Power off.	Power on
	Press this button once	Hang up the call	When a call come or in communication or Dialing out
		Power On	Power off And inserted SIM card
SOS	Press this button for 3 sec	Send SOS alert to VIP numbers Note: JT600 will be vibrating if SOS alert was sent successfully.	Normal. Power on

	Press this button once	press the SOS button once, the LED indication of SOS would be changed in turn, as below: On: flashlight Flash: the led would flash according to the international SOS standard Off: SOS led is off	Normal. Power on

(Table 1)

4.3 Working mode

No.	Working mode	Wakeup condition	GSM Module while sleeping	GPS Module while sleeping	Note
1	Standard	Press any button/coming call/SMS	Sleep	Power on	both GSM and GPS module work properly, the device can be used to call and receive incoming call, send and receive text messages at any time.
2	Timing	Data upload interval timer	Power off	Power off	Preset the time point, the device will wake automatically at this preset time, and works for 10 minutes before getting into the sleep mode. The device supports 48 time points in maximum, but the interval between each two points should be above 30 minutes. GSM and GPS module work properly at the working period, and both are closed in the

					sleeping period. The device works only 10 minutes in every awaken, so the interval for data uploading should be set less than 10 minutes, otherwise the data cannot be uploaded properly.
3	Vibration	Vibrating	Power off	Power off	Vibration awaken, the device will go to sleep in 10 minutes from last vibration. Both GSM and GPS module works properly in working period, but both are closed in sleeping period. The device works only 10 minutes in every awaken, so the interval for data uploading should be set less than 10 minutes, otherwise the data cannot be uploaded properly.

(Table 2)

4.4 Voice communication

JT600 has the two-way voice function, It can dial preset phone numbers and receive phone call as well. When a call coming, the unit will ring, press CALL Ⅰ button once to receive the call.

Press CALL Ⅰ or CALL Ⅱ button for 3 seconds to call the preset VIP number.

The phone call can also be hung up by pressing power button once.

V First Use

5.1 Install SIM card

Make sure the SIM Card has been activated GPRS internet access and SMS function. You can check it in your mobile phone.

Plug the SIM card into SIM Card slot and Power on JT600.

5.2 Charging

Normally, you need Charge it about 5 hours. The "CH" LED will turn green when charged enough.

5.3 LED Indications

LED	Status	Note
CH LED(RED)	On	Charging
	Turn Green	The battery is full
	Off	No charging
POW LED (yellow)	Blinking	Low Battery. You need to charge the unit.
GSM LED(Green)	Blinking every 5 seconds	JT600 got GSM signal.
	Blinking every 1 seconds	JT600 didn't get GSM signal Or Didn't plug SIM card
	Blinking 10 times in one second(Very fast)	GPRS connected, Data uploading to center server.
GPS LED(Blue)	Blinking every 10 seconds	GPS signal is valid
	Blinking every 3 seconds	GPS signal is invalid
	Off	GPS module Power off
Flashlight	On	Flashlight

LED(White)	Thrice long and short circulating continuously	SOS
	Off	Normal
Note: All LEDs will be off if the tracker goes to sleep mode.		

(Table 3)

5.4 Configure by PC setup software

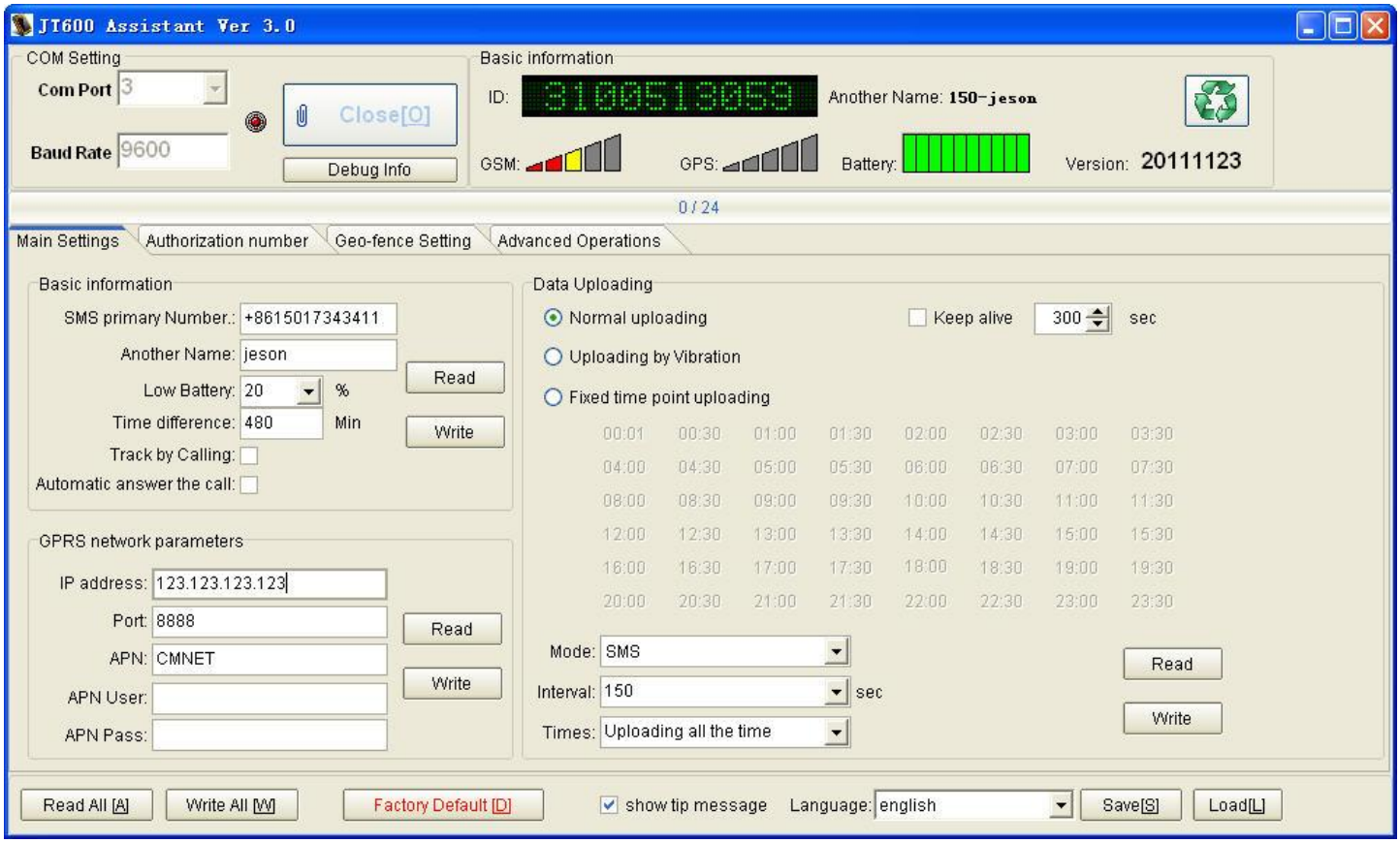
Refer to the manual《JT600 Mini-USB Cable Driver InstallationV1.2.pdf》,Install the Mini-USB cable driver, and plug it to PC. Copy "**JT600 Assistant V3.0**" software to your PC and Open it.

Note:

If you open this software in Win 7 system, Please right click its ICON, and Click "Run as administrator", Or This software won't show the COM port number.

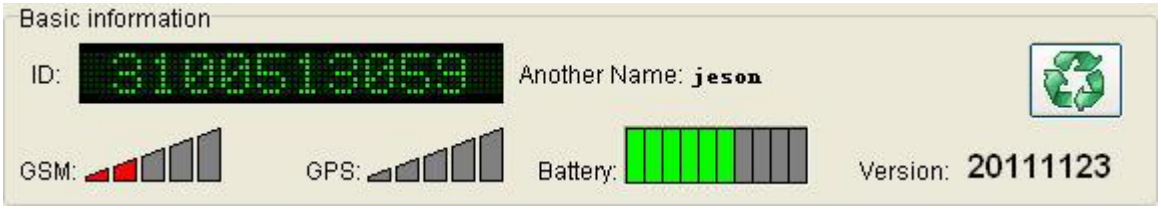
5.4.1 PC setup Software Introductions

5.4.1.1 Main Settings

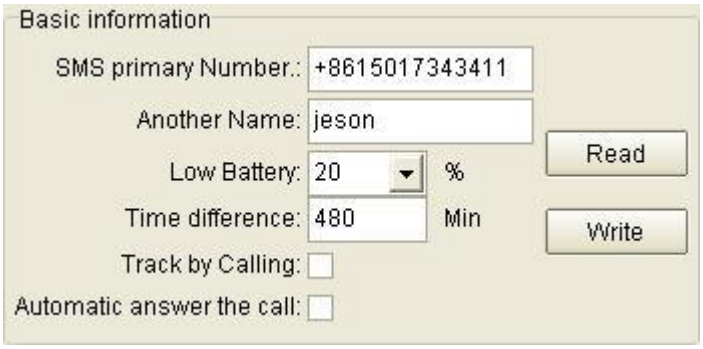


Name	Parameter	Explain	Note
Com Port	3	Get The COM port number after plugged the Configuration cable	Refer to the manual《JT600 Mini-USB Cable Driver InstallationV1.2.pdf》
Baud Rate	9600	Fixed value	
Open/Close	Open/Close	Click it, and Connect to PC	

Debug Info		Click it ,Pop-up a window shows all commands reply message	

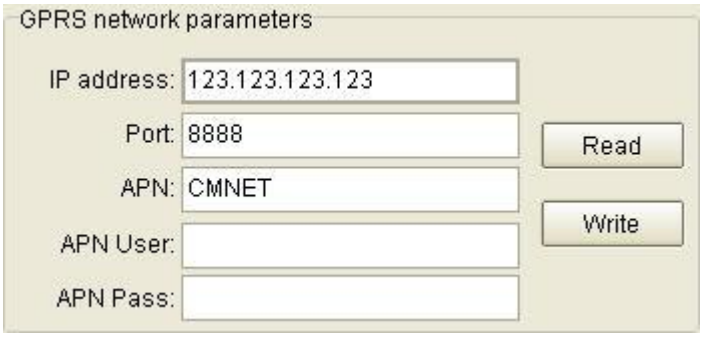


Item	Parameter(e.g.)	Explain	Note
		Click it, and Get all Basic information	
Another Name	jeson	You need to set the Another name firstly. Or it shows blank	
ID	3100513059	10 digit numbers. It's the unique ID of this unit	
GSM		Indicates GSM signal Strength	
GPS		Indicates GPS signal Strength	
Battery		Indicates Charging status of Battery	
Version	20111123	Firmware version	



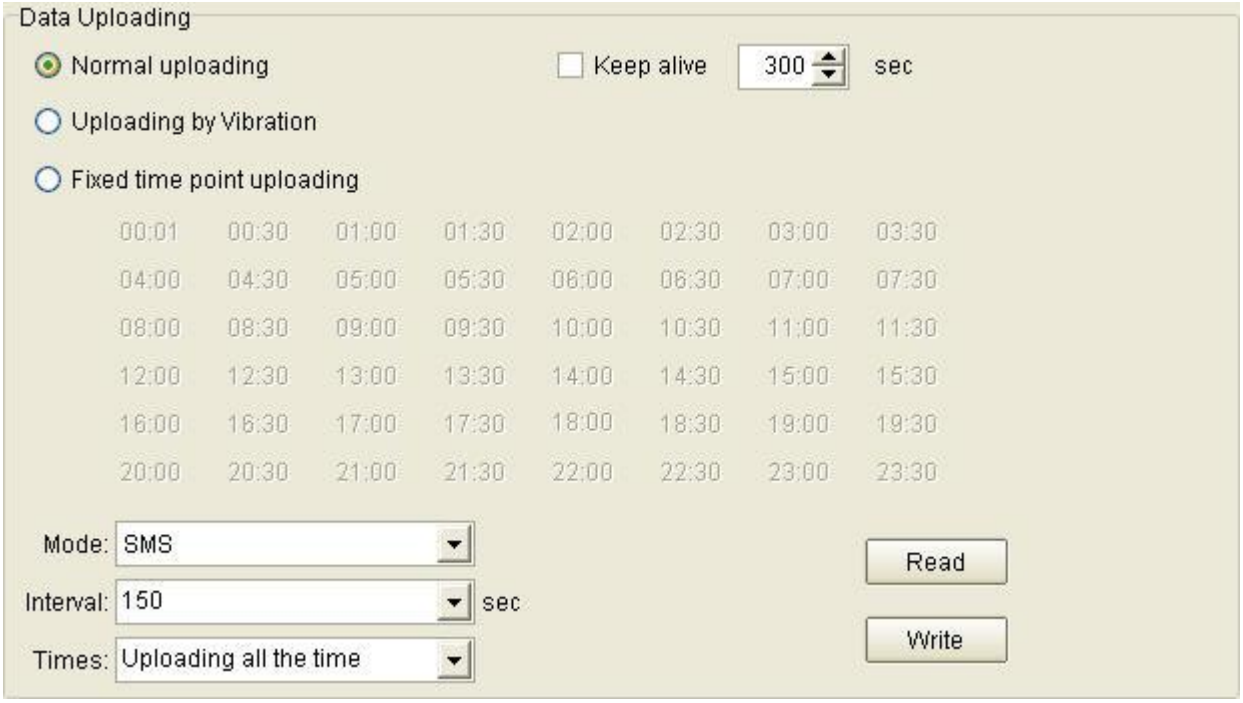
Item	Parameter(e.g.)	Explain	Note
SMS Primary Number	+8615017343411	Set it to receive all location short message ,alert message and command reply message.	Supports country code
Another Name	jeson	Set it to replace the unique ID of each location short message.	**jeson**,09-28 12:11:02,Speed:32km/h,Battery:80%,GPS:13, STANDARD, http://maps.google.com/?q=22.549737N,114.076685E
Low Battery	20	when the battery charge is low than 20%, there is a low battery alert.	Maximum value 90, minimum value 10.
Time difference	480	China GMT+8. 480minutes	JT600 outputs Greenwich time. It has to be adjusted to local time. To set time zone behind GMT use –(Minus sign)
Track by Calling	checkbox	Enable this function, and you will get a location short message after called the unit.	Default, This function is disabled. 1)The calling number must be authorization numbers(SMS Primary number or VIP numbers). 2)The SIM card in tracker must be activated call screening function. 3) It's better to hold on 2 times ring before hang

			up.
Automatic answer the call	checkbox	Enable this function, And JT600 will answer the coming call automatically after ring 3 times.	Default, This function is disabled. 1)The SIM card in tracker must be activated call screening function.
Read		Read current tracker's settings for above items.	
White		Write above settings to the tracker.	

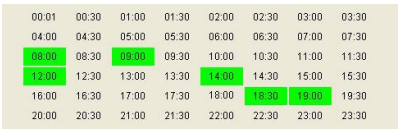


Item	Parameter(e.g.)	Explain	Note
Ip address	123.123.123.123	Server IP address **or** Domain name	
Port	8888	TCP port	
APN	CMNET	China mobile GPRS access point name. CMNET	Please ask the GPRS service provider
APN user		No need set it if the APN user is blank.	
APN pass		No need set it if the APN pass is	

		blank.	
Read		Read current tracker's settings for above items.	
White		Write above settings to the tracker.	



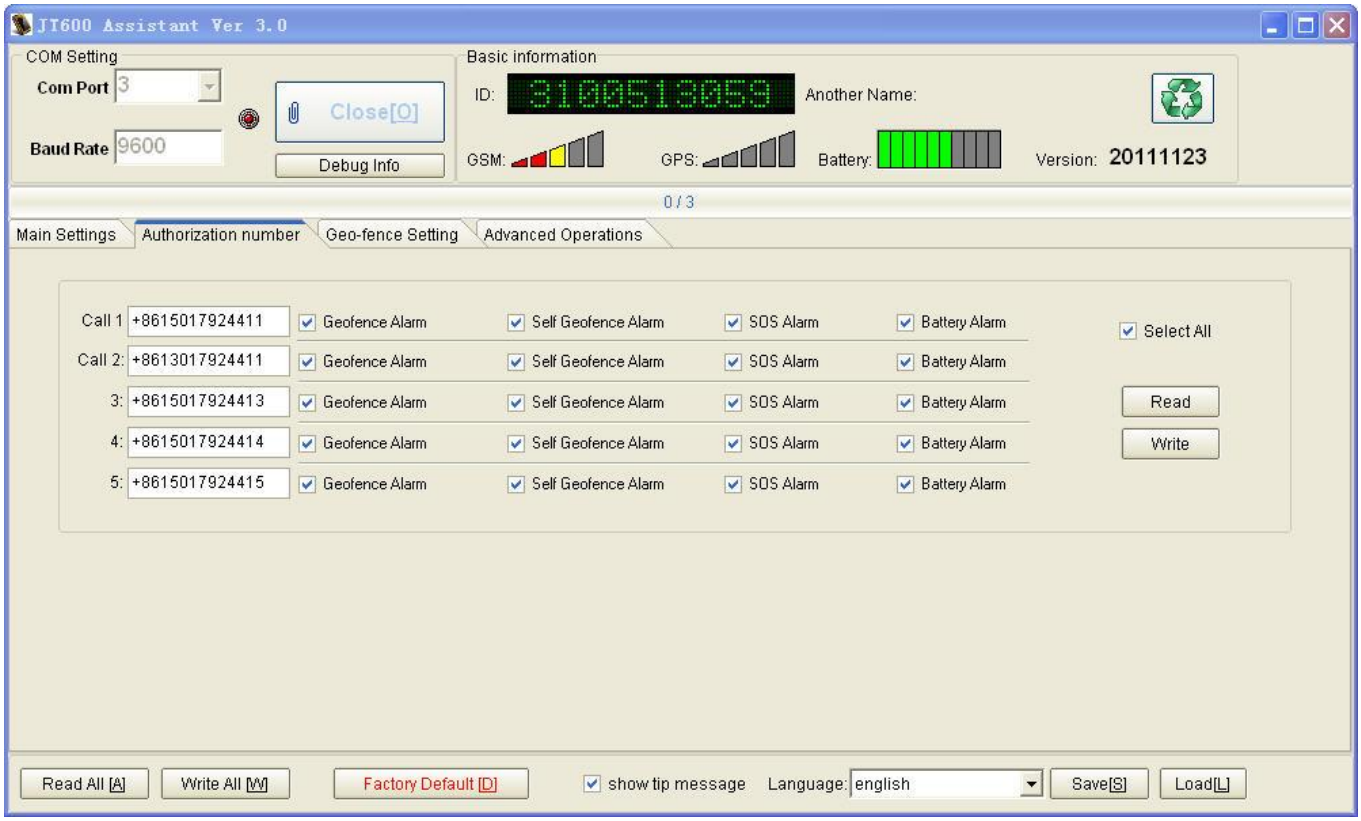
Item	Parameter(e.g.)	Explain	Note
Normal Uploading	Radio button	Click it ,enable "Normal Uploading"	If you choose this Uploading mode,JT600 will upload data as preset time interval and data transmission mode all the time.
Keep Alive	Checkbox and 300	enable this function,JT600 will upload a keep alive report to center server	Default, This function is disabled. The unit can be set to send short keep alive report to the server to

		every 300 seconds. **Note:** If the data uploading interval is more than the time that GSM provider cut GPRS connection. You must enable the Keep alive function. Or you can't control JT600 by server.	prevent the disconnection from the mobile service provider. Some GSM provider might cut connection if there is no data within certain time.
Uploading by Vibration	Radio button	enable "Uploading by Vibration"	Vibration awaken, the device will go to sleep in 10 minutes from last vibration. Both GSM and GPS module works properly in working period, but both are closed in sleeping period. The device works only 10 minutes in every awaken, so the interval for data uploading should be set less than 10 minutes, otherwise the data cannot be uploaded properly.
Fixed time point uploading	Radio button  	enable "Fixed time point uploading" And Click the time label to choose the time points. Jt600 will wake up when the time at 8:00,9:00,12:00, 14:00,18:30,19:30. **Note:** 1)You need adjust the time	Preset the time point, the device will wake automatically at this preset time, and works for 10 minutes before getting into the sleep mode. The device supports 48 time points in maximum, but the interval between each two points should be above 30 minutes. GSM and GPS module work properly at the working period, and both are closed in the sleeping period. The device works only 10 minutes in every

		difference to local time. 2)JT600 must locate position at the first time.	awaken, so the interval for data uploading should be set less than 10 minutes, otherwise the data cannot be uploaded properly.
Mode	SMS	Data transmission mode SMS	Uploading location Short message to SMS primary number.
	TCP	Data transmission mode GPRS	Uploading GPS data to Server IP address and TCP Port
Interval	150	150 seconds SMS [150,65535] TCP [5,65535]	Please refer to Section 2.4.4 P04 Enquire or Set Data uploading interval. <JT600 protocol>
Times	Uploading all the time	=0,Uploading data all the time. =[1,65535] It will stop uploading when reaching preset times.	
Read		Read current tracker's settings for above items.	
White		Write above settings to the tracker.	

Item	Parameter(e.g.)	Explain	Note
Read All		Read all settings of the tracker	Exclude Geo-fence
Write All		Write all settings of the tracker	Exclude Geo-fence
Factory Default		Restore factory default	Restore factory settings. It will clear parameters(such as Geo-fence/Uploading mode) except IP address,Port,SMS Primary number, VIP numbers, APN,APN account,Another name and time difference.and JT600 will be reset to Normal Uploading and SMS mode.
Show tip message	checkbox	show the “operation success” pop-up window when read or write the setting successfully.	
Language		Supports multi-language	
Save		Save all parameters to PC	
Load		Load all parameters from PC	

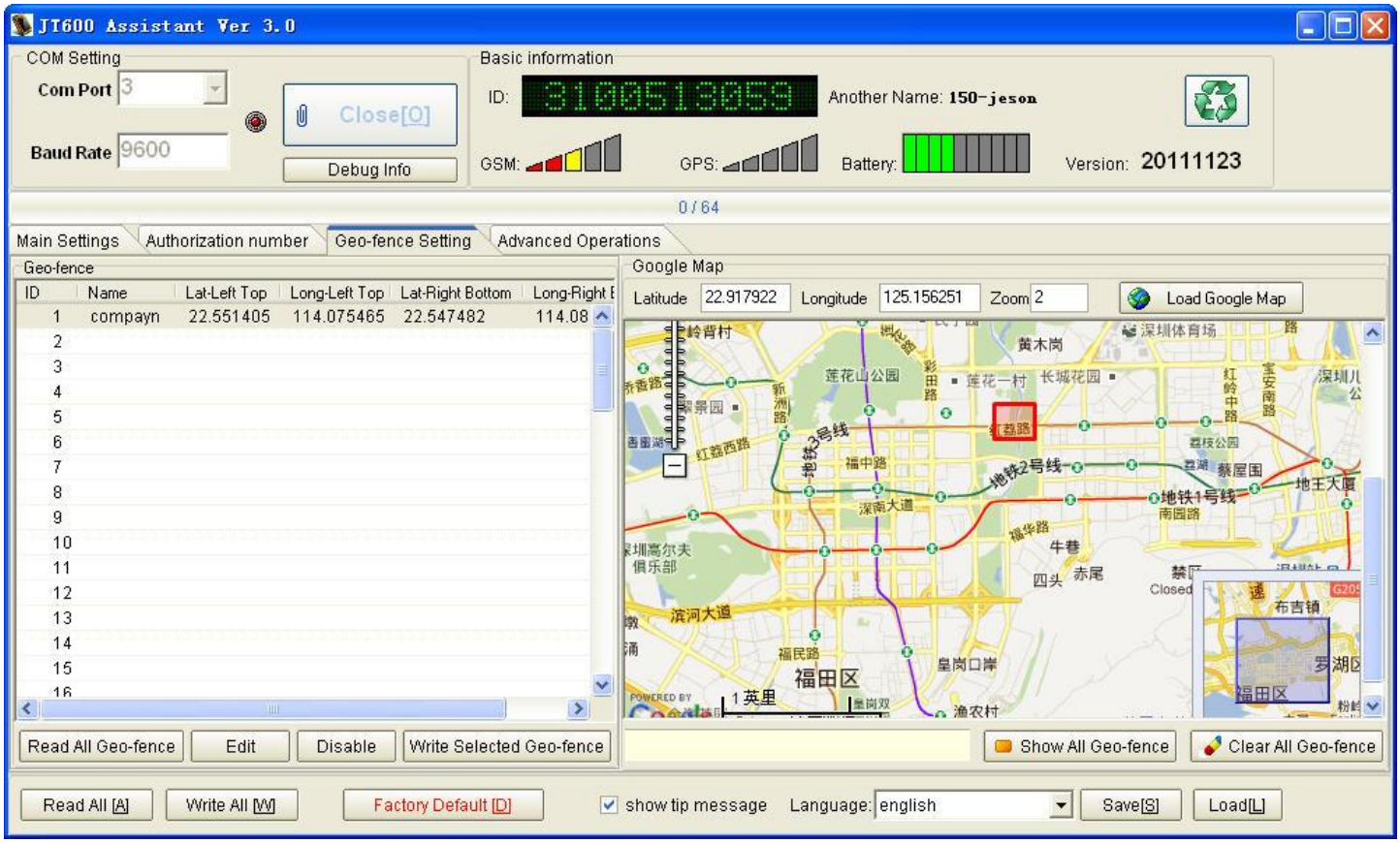
5.4.1.2 Authorization Number

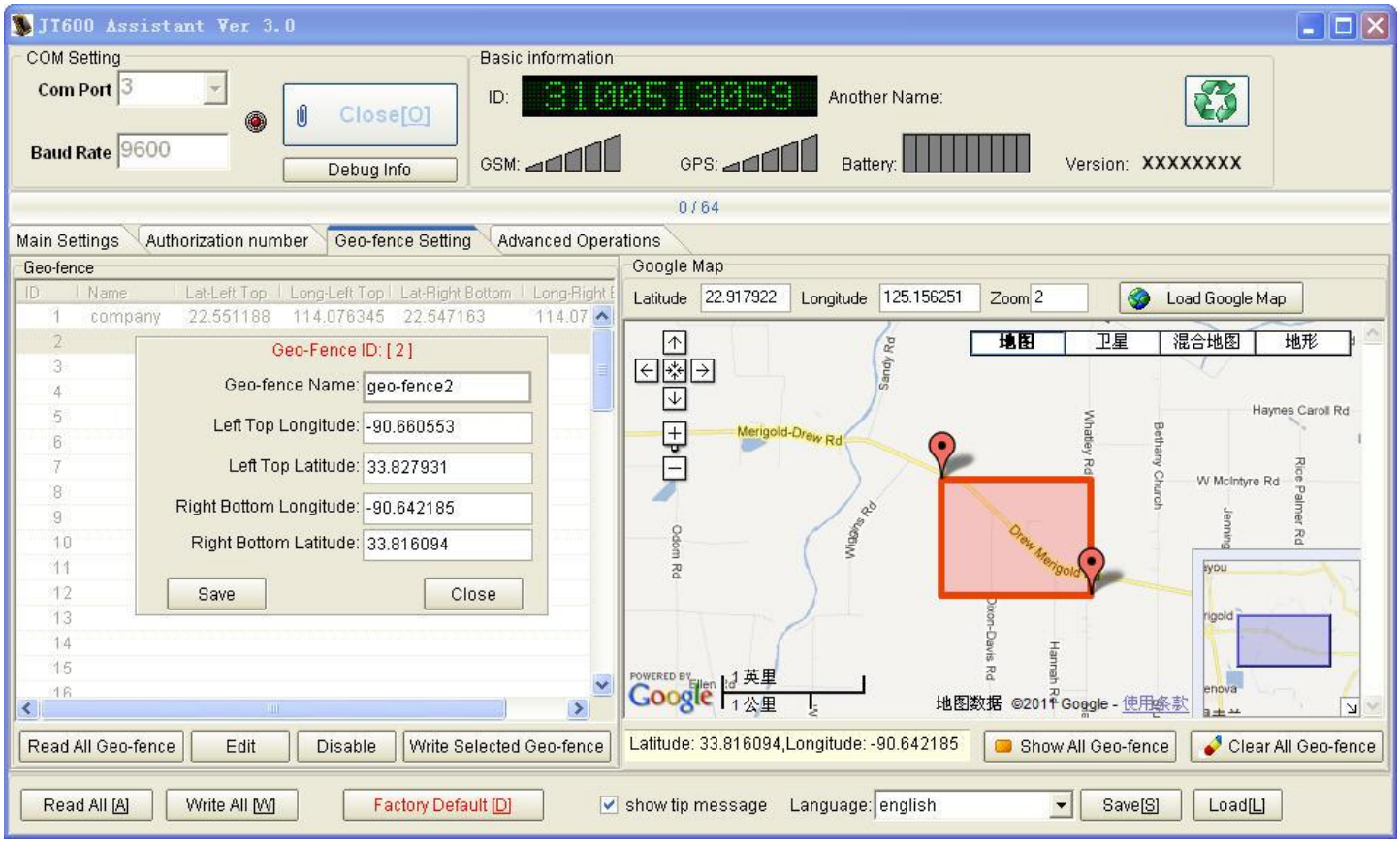


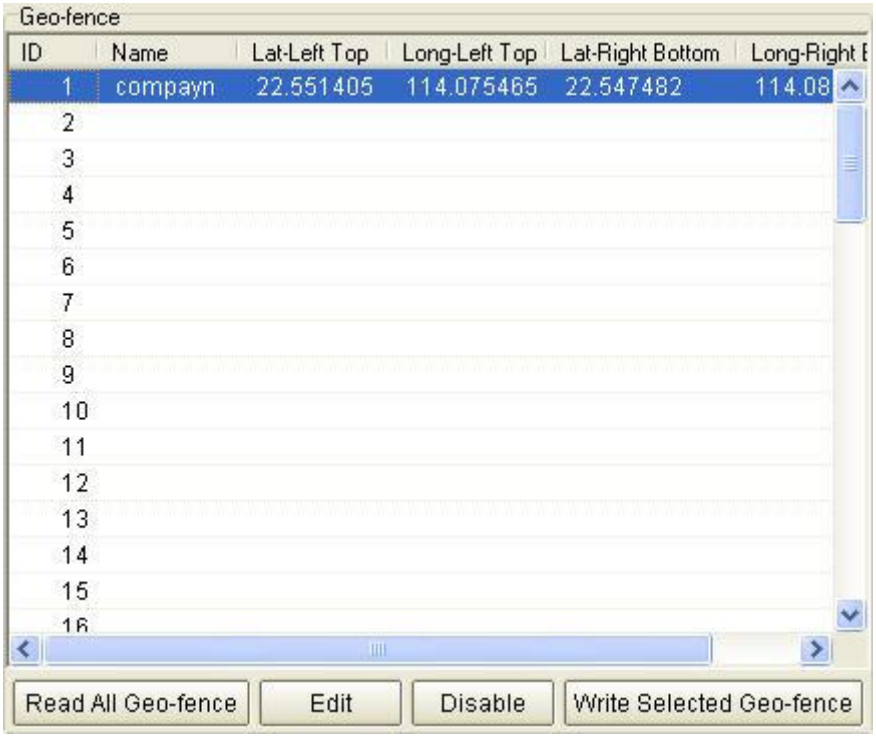
Item	Parameter(e.g.)	Explain	Note
Call 1	+8615017924411	Set the first VIP number. Press the CALL Ⅰ Button for 3 sec,JT600 will call this number.	Supports country code. And It receives SMS reply message, alert message.
Call 2	+8613017924411	Set the second VIP number. Press the CALL Ⅱ Button for 3 sec,JT600 will call this	Supports country code. And It receives SMS reply message, alert

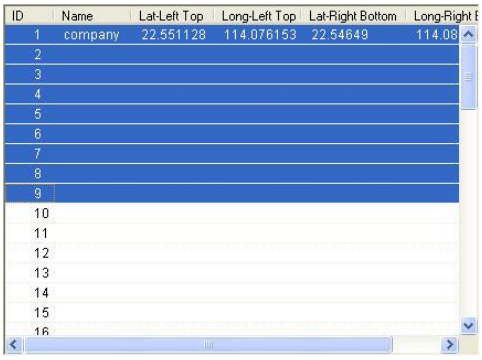
		number.	message.
3	+8615017924413	VIP number 3	Supports country code. And It receives SMS reply message, alert message.
4	+8615017924414	VIP number 4	Supports country code. And It receives SMS reply message, alert message.
5	+8615017924415	VIP number 5	Supports country code. And It receives SMS reply message, alert message.
Geo fence alarm	checkbox	Choose it, So the corresponding VIP number can receive this alert message.	User entered into or exited the preset Geo-fence ,there would be a Geo-fence alarm.
Self Geo-fence alarm	checkbox	Choose it, So the corresponding VIP number can receive this alert message	Press the CALL Ⅱ Button twice within 3 seconds to set self Geo-fence.
SOS alarm	checkbox	Choose it, So the corresponding VIP number can receive this alert message	
Battery alarm	checkbox	Choose it, So the corresponding VIP number can receive this alert message	Low Battery alarm.
Read		Read current tracker's settings for above items.	
White		Write above settings to the tracker.	

5.4.1.3 Geo-fence Setting


JT600 Assistant Ver 3.0
COM Setting
Com Port 3
Baud Rate 9600
Close[O]
Debug Info
Basic information
ID: 3100513059
Another Name: 150-jeson
GSM:
GPS:
Battery:
Version: 20111123
0 / 64
Main Settings
Authorization number
Geo-fence Setting
Advanced Operations
Geo-fence
ID Name Lat-Left Top Long-Left Top Lat-Right Bottom Long-Right
1 compayn 22.551405 114.075465 22.547482 114.08
Google Map
Latitude 22.917922
Longitude 125.156251
Zoom 2
Load Google Map
Read All Geo-fence
Edit
Disable
Write Selected Geo-fence
Show All Geo-fence
Clear All Geo-fence
Read All [A]
Write All [W]
Factory Default [D]
show tip message
Language: english
Save[S]
Load[L]

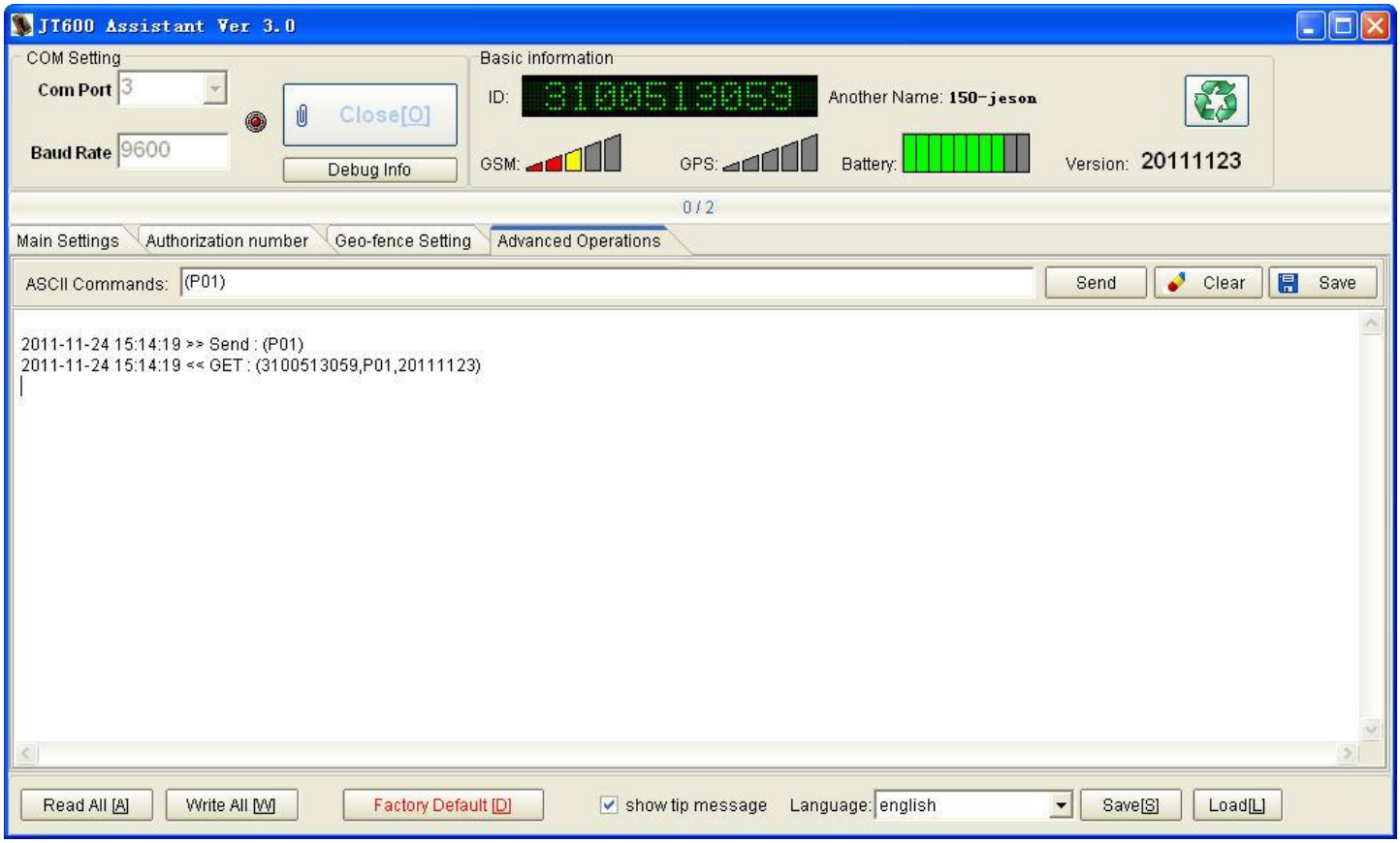

JT600 Assistant Ver 3.0
COM Setting
Com Port 3
Baud Rate 9600
Close[O]
Debug Info
Basic information
ID: 3100513059
Another Name:
GSM:
GPS:
Battery:
Version: XXXXXXXX
0 / 64
Main Settings
Authorization number
Geo-fence Setting
Advanced Operations
Geo-fence
ID Name Lat-Left Top Long-Left Top Lat-Right Bottom Long-Right E
1 company 22.551188 114.076345 22.547163 114.07
Geo-Fence ID: [2]
Geo-fence Name: geo-fence2
Left Top Longitude: -90.660553
Left Top Latitude: 33.827931
Right Bottom Longitude: -90.642185
Right Bottom Latitude: 33.816094
Save
Close
Google Map
Latitude 22.917922
Longitude 125.156251
Zoom 2
Load Google Map
地图
卫星
混合地图
地形
Merigold-Drew Rd
Sandy Rd
Whatley Rd
Bethany Church
Haynes Caroll Rd
W McIntyre Rd
Rice Palmer Rd
Odom Rd
Wiggins Rd
Drew Merigold
Oxon-Davis Rd
Hannah Rd
1 英里
1 公里
地图数据 ©2011 Google - 使用条款
Read All Geo-fence
Edit
Disable
Write Selected Geo-fence
Latitude: 33.816094,Longitude: -90.642185
Show All Geo-fence
Clear All Geo-fence
Read All [A]
Write All [W]
Factory Default [D]
show tip message
Language: english
Save[S]
Load[L]


Geo-fence
ID Name Lat-Left Top Long-Left Top Lat-Right Bottom Long-Right E
1 compayn 22.551405 114.075465 22.547482 114.08
Read All Geo-fence
Edit
Disable
Write Selected Geo-fence

Item	Parameter(e.g.)	Explain	Note
ID	1 to 64	Click this record and Get the Geo-Fence on Google map. Double Click this record and begin to edit this fence.	Please Load the Google Map at right side.
Read All Geo-fence		Read all Geo-fence settings	Please Load the Google Map at right side.
Edit		Edit selected Geo-fence Click “Save” button to set Geo-fence to tracker. Click “Close” button: Cancel the changing and Close this window.	1) You can input the Geo-fence’s latitude and longitude manually. 2) Click the map twice ,and Get latitude and longitude from Google map.
Disable		Click this button to disable the selected Geo-fence.	
Write selected Geo-fence		‘**CTRL** +**A** ‘ ,you can choose all records. ‘**Shift**’ choose some of records.	It’s useful when you need the same Geo-fence setting for another tracker.

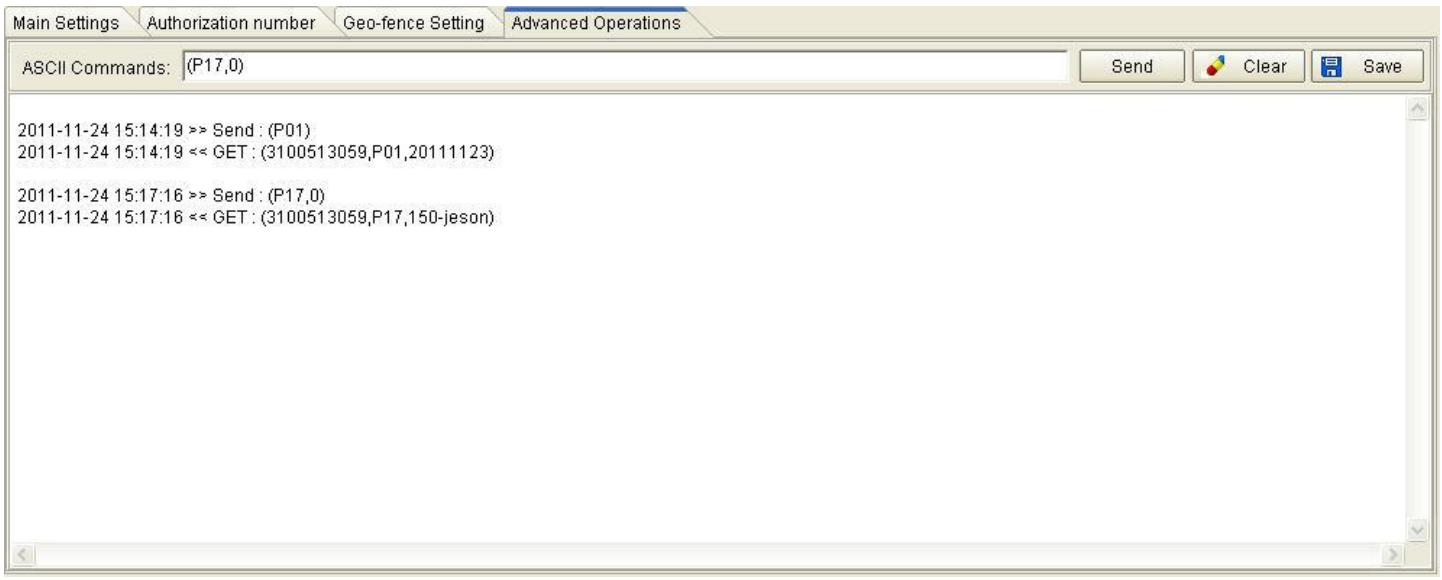
Item	Parameter(e.g.)	Explain	Note
Default Map View		Define the default map view when you load Google Map	
Load Google Map		Load Google map	PC has internet access.
Current Location		Click Google Map and Get current latitude and longitude	
Show All Geo-fence		Show All Geo-fence on Google Map	
Clear All Geo-fence		Clear All Geo-fence on Google Map	

5.4.1.4 Advanced Operations



The Interface for people who know JT600 protocol well.

You can send any ASCII command in protocol on this interface.



Item	Parameter(e.g.)	Explain	Note
ASCII command		Please read JT600 protocol carefully.	
Send		Send this command	
Clear		Clear the below commands records	
Save		Save all records to PC	It's useful for engineer to analysis your Operations.

5.5 Location Short Message format

GPS data is sent via SMS. The format as below:

(A) If GPS signal is valid, the message will be:

3101223002,09-28 12:11:02,Speed:32km/h,Battery:80%,GPS:13, STANDARD,
http://maps.google.com/?q=22.549737N,114.076685E

(B) If GPS signal is invalid, the message will be :

3101223002,09-28 12:11:02,Speed:32km/h,Battery:80%,Base Station, STANDARD,
Cell ID:4232,LAC: 10133

Item	Content	Description
1	e.g"John"or 3101223002..etc	Unique ID or Another name
2	09-28 12:11:02	Month/Day/hour/minute/second
3	Speed:32km/h,	
4	Battery:80%	It will show "Charging" when charge the battery.
5	GPS:13,	1) Number of satellites received; 2) If GPS signal is invalid, this item will be replace with "Base Station". It indicates item 7 is got from Base station.
6	STANDARD	Working mode

7	e.g: http://maps.google.com/?q=22.549737N,114.076685E	1)If GPS signal is valid,JT600 repies a Google map link. Click this link to view fix location via mobile phone; 2)If GPS signal is invalid, JT600 repies CELL ID and LAC. CELL ID and LAC are got from Base station and showed in decimal system. e.g Cell ID:4232,LAC: 10133

5.6 Configure by SMS

5.6.1 SMS Command Framework and List

No.	name	Length (bytes)	Note
1	Packet head	1	Fixed "("
2	command	3	Such as P03 ect…
3	separative sign	1	“,”mark
4	parameter	N	"," to separate the various parameters
5	Packet end	1	)

Command Code	Description	Example
P01	Enquire the firmware version	(P01)

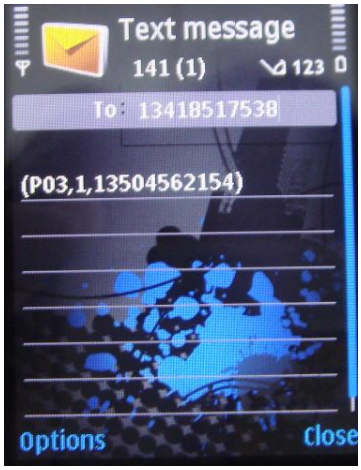
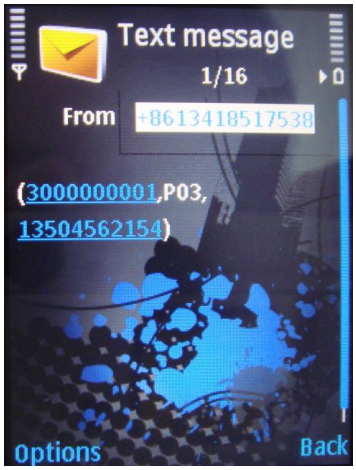
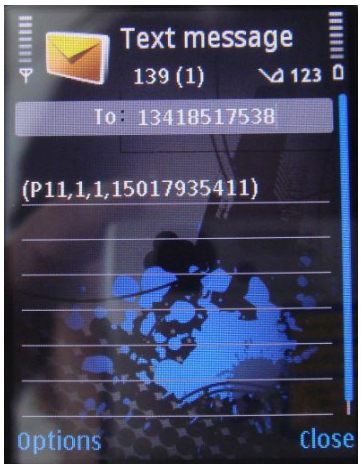
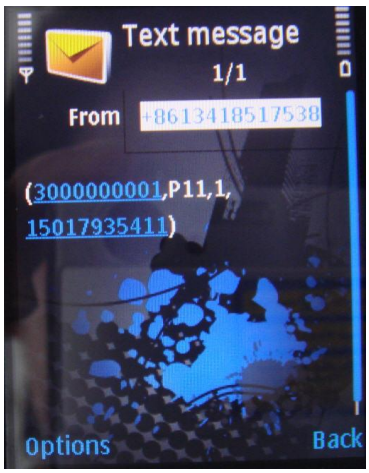
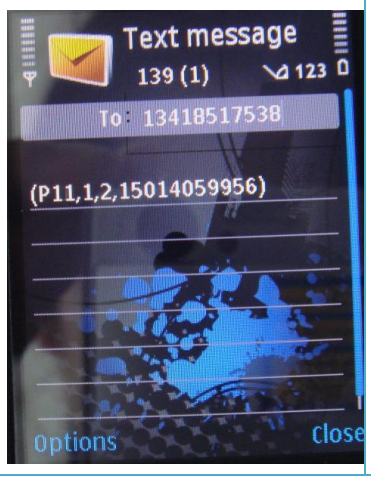
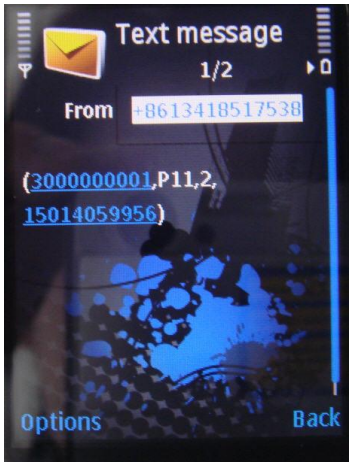
P02	Enquire current position	(P02)
P03	Enquire/Set SMS Primary number	(P03,1,13919192020) / (P03,0) Parameter[1]: 1 means setting ,0 means enquiring Parameter[2]: 13919192020 means SMS center number. Don't be more than 15 digital numbers. Supports country code.
P04	Enquire/Set Data uploading interval	(P04,1,60,2,1) / (P04,1,150,0,0) / (P04,0) Parameter[1]: 1 means setting, 0 means enquiring Parameter[2]: 60 means 60 seconds ,uploading every 60 seconds Parameter[3]: 2 means uploading 2 times and then stops uploading data. If you input 0 ,It will upload data all the time. Parameter[4]:1 1 indicates TCP ,0 indicates SMS
P05	Enquire/Set GPRS network parameters(IP address, Port)	(P05,1,211.154.134.212,8000,CMNET,,) / (P05,0) Parameter[1]: 1 means setting, 0 means enquiring Parameter[2]: 211.154.134.212 means Server IP address Parameter[3]: 8000 means TCP port Parameter[4]: CMNET means APN name .access point name at local. CMNET is example in china. Parameter[5]: APN user APN username. If it's blank. no need input it. Parameter[6]: APN pass APN password. If it's blank. no need input it.
P08	Enquire/Set Geo-fence	(P08,1,1,11323.1234,2312.2321,11326.4312,2308.1233,area 1) Parameter[1]: 1 means setting, 0 means enquiring Parameter[2]: 1 means Geo-fence ID.JT600 supports 64 fences.

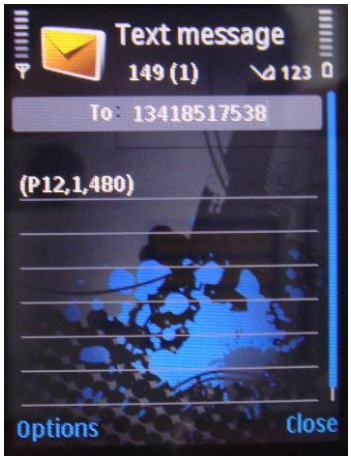
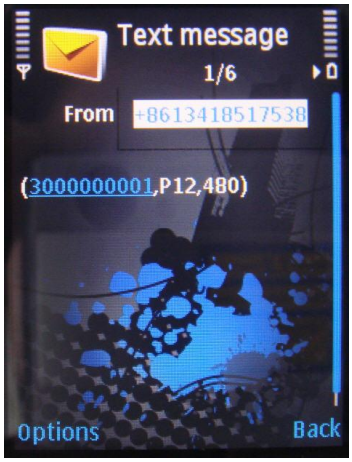
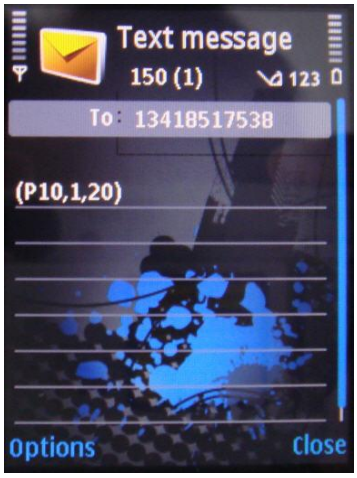
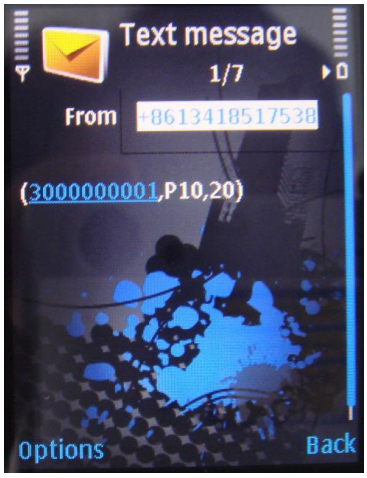
		Parameter[3]: 11323.1234,2312.2321,11326.4312,2308.1233 means 11323.1234 left top longitude, 2312.2321 left top latitude, 11326.4312 right bottom longitude, 2308.1233 right bottom longitude. It's a rectangular region. Please set Geo-fence by **JT600 Assistant** software. Parameter[4]: area 1 means Geo-fence name.
P10	Enquire/Set Low battery alert	(P10,1,20) Parameter[1]: 1 means setting, 0 means enquiring Parameter[2]: 20 means 20%. when the power percent of the battery is low than this. There would be a Low Battery alert.
P11	Enquire/Set VIP numbers	(P11,1,1,13910102345) / (P11,0,5) Parameter[1]: 1 means setting, 0 means enquiring Parameter[2]: 1 means the first VIP number(CALL Ⅰ).JT600 supports 5 VIP numbers. Parameter[3]: 13910102345 means Cell phone number
P12	Enquire/Set time difference	(P12,1,480) / (P12,0,480) / (P12,0) Parameter[1]: 1 means setting, 0 means enquiring Parameter[2]: 480 means 60*8=480 minutes. 480 is example. JT600 outputs Greenwich time. So It must be adjusted to local time.
P13	Require SOS LED flashing	(P13,1,1) / (P13,1,0)

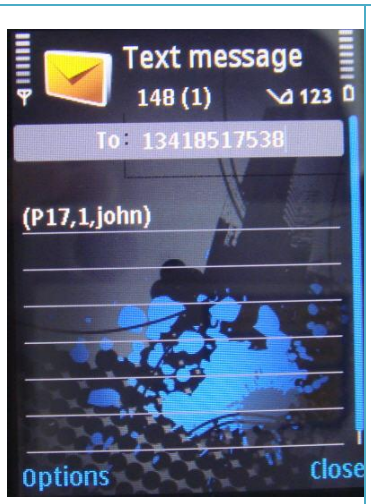
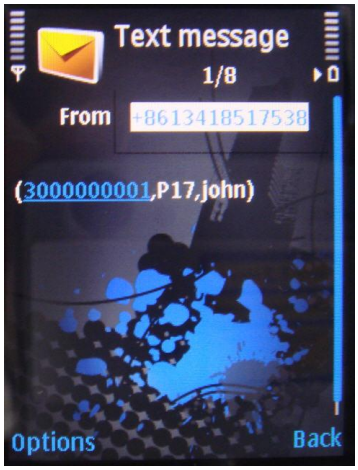
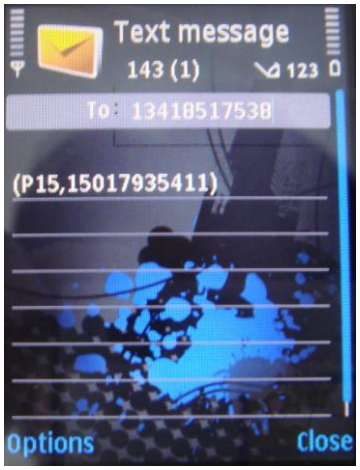
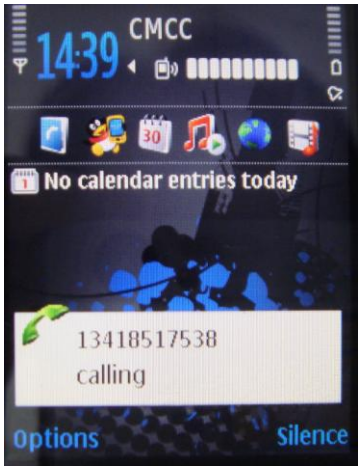
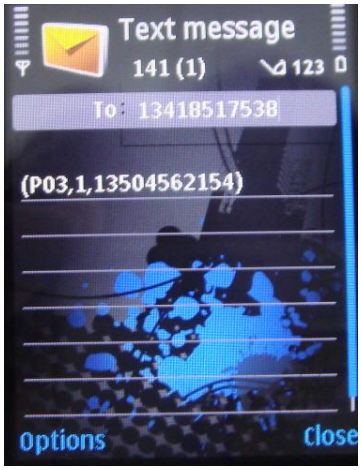
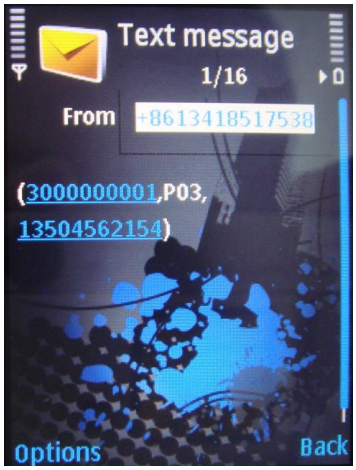
		Parameter[1]: 1 means setting, 0 means enquiring Parameter[2]: 1 means open the SOS LED .0 means close the SOS LED.
P14	Set ring volume	(P14,1,5) / (P14,0,5) Parameter[1]: 1 means setting, 0 means enquiring Parameter[2]: 5 from 1 to 7. 1 indicates minimum volume. 7 indicates maximum volume.
P15	Require Listen-in remotely	(P15,13919192020) Parameter[1]: 13919192020 means cell phone number. After you send this command ,JT600 will call this number.
P16	Enquire current battery	(P16)
P17	Enquire/Set another name	(P17,1,jointech) Parameter[1]: 1 means setting, 0 means enquiring Parameter[2]: jointech means another name. jointech is a example.
P20	Factory reset	(P20)

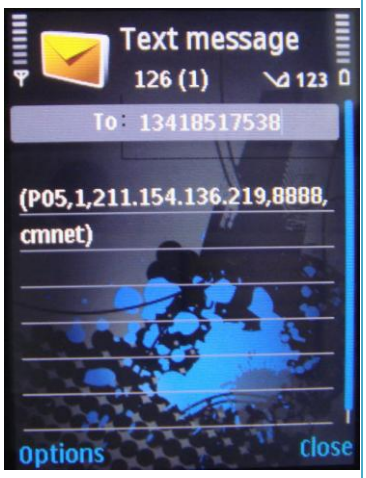
5.6.2 Short Message Command Example

Feature	Command format example	Send Short message command via cell phone	Reply message from JT600

Set SMS Primary number	(P03,1,13504562154) // SMS Primary number		
Set CALL Ⅰ number	(P11,1,1,15017935411)		
Set CALL Ⅱ number	(P11,1,2,15014059956)		

Enquire current position	(P02)		John ,09-28 12:11:02,Speed:32km/h, Battery:80%,GPS:13,STANDARD, http://maps.google.com/?q=22.549737N,114.076685E
Set time difference	(P12,1,480) *//GMT +8* *8*60=480 minutes in china*		
Set Low battery alert	(P10,1,20) //20%		

Set Another name	(P17,1,John)		
Listen-in remotely	(P15,15017935411)		
The following commands are used for real-time monitoring setting. Data transmission via GPRS.			
Set SMS Primary number	(P03,1,13504562154) // SMS Primary number		

Set working mode	(P07,1,1) *//Standard mode*		(P07,1)
Set IP address and APN parameter	(P05,1,211.154.136.219,8888,cmnet,,) *//cmnet* *GPRS APN in china* The whole command: (P05,1,211.154.136.219,8888,APN,APN user,APN pass)		(30000000001,P05,211.154.136.219,8888,cmnet,,)
Set Data uploading interval for SMS or GPRS	(P04,1,60,0,1) //upload GPS data every 60 seconds continuously		(30000000001,P04,60,0,1)

VI Product Specification

6.1 Physical Parameters and Environmental

size	unit : 96mm * 51mm * 22mm , bake up battery
weight	unit : 80g , backup battery: 50g
housing	plastic
Working temperature	-25~+70℃

Inbuilt Battery	1800mAh
Back-up battery	2500mAh

6.2 GPS module parameter

Chipset	SiRF Star III
Frequency	L1,1575.42MHz
Code	C/A Code
Protocol	NMEA 0183 V2.2 Default:GGA,GSA,GSV,RMC Support:VTG,GLL,ZDA SiRF binary and NMEA Command
Available Baud Rate	4,800 to 57,600 bps adjustable
Channels	20
FLASH	4Mbits
Sensitivity	-159dBm
Cold start	42 seconds,average
Worm start	38 seconds,average
Hot start	1 second,average
Accuracy	Position : 10 meters,2D RMS 5 meters,2DRMS,WAAS enabled Velocity : 0.1m/s Time : 1us synchronized to GPS time
Maximum Altitude	< 18,000 meter
Maximum	< 515 meter/second

Velocity	
Maximum Acceleration	< 4G
Update Rate	1Hz
DGPS	WAAS,EGNOS,MSAS
Datum	WGS-84

6.3 GSM module parameter

Frequency bands	SIM900 Quad-band: GMS 850,EGSM 900,DCS 1800,PCS 1900. The band can be set by AT COMMAND, and default band is EGSM 900 and DCS 1800. Compliant to GSM Phase 2/2+.
GSM class	Small MS
Transmit power	Class 4(2W) at EGSM900 and GSM850 Class 1(1W) at DCS1800 and PCS 1900
GPRS connectivity	GPRS multi-slot class 10 GPRS mobile station class B
Temperature range	Normal operation : -20~+55℃ Restricted operation : -25~+70℃
Data GPRS	GPRS data downlink transfer: max. 85.6 kbps GPRS data uplink transfer: max. 42.8 kbps Coding scheme: CS-1, CS-2, CS-3 and CS-4 SIM900 supports the protocols PAP (Password Authentication Protocol) usually used for PPP connections. The SIM900 integrates the TCP/IP protocol. Support Packet Switched Broadcast Control Channel (PBCCH) CSD transmission rates: 2.4, 4.8, 9.6, 14.4 kbps, non-transparent

	Unstructured Supplementary Services Data (USSD) support
SMS	MT, MO, CB, Text and PDU mode SMS storage: SIM card Support transmission of SMS alternatively over CSD or GPRS. User can choose preferred mode.
SIM interface	Supported SIM card: 1.8V ,3V
Audio features	Speech codec modes: Half Rate (ETS 06.20) Full Rate (ETS 06.10) Enhanced Full Rate (ETS 06.50 / 06.60 / 06.80) Echo suppression
External antenna	Connected via 50 Ohm antenna connector or antenna pad.
Two serial interfaces	Serial Port 1 Seven lines on Serial Port Interface Serial Port 1 can be used for CSD FAX, GPRS service and send AT command of controlling module. Serial Port 1 can use multiplexing function, but you can not use the Serial Port 2 at the same time; Autobauding supports baud rate from 1200 bps to 115200bps. Serial port 2 Two lines on Serial Port Interface /TXD and /RXD Serial Port 2 only used for transmitting AT command.
Phonebook management	Supported phonebook types: SM, FD, LD, RC, ON, MC
SIM Application Toolkit	Supports SAT class 3, GSM 11.14 Release 98
Real time clock	Implemented
Timer function	Programmable via AT command
Firmware upgrade	Firmware upgradeable over serial interface

Ⅶ Standard package and optional accessories

Item	Accessories name	Unit	Explain	Accessories picture
1	Main body(including 1800mAh battery)	pcs	Standard	
2	Mini-USB charging/configuration cable	pcs	Standard	
3	CD（user manual/ configure software）	pcs	Standard	The latest information can be downloaded from www.joint-tracking.com
4	Charging(directly)	pcs	Optional	
5	Back-up battery（2500mAh）	pcs	Optional	

6	Upgrade cable	pcs	Optional	

Ⅷ FAQ

1. Default, The unit works at Normal uploading SMS mode and Uploads location short message every 150 seconds.
2. The unit can only be powered on whiles SIM card put in. The unit will powered off as soon as the SIM card pulled out.
3. If you connected the upgrade cable with JT600,It would be shutdown. To power on the unit, you have to pull and plug SIM card and press power button once.

IX SAR

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government.These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all

persons,regardless of age and health. The exposure of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg and the CE is 2.0 W/kg. transmitting at its highest certified power level in all Your Portable GPS Tracker is a radio transmitter and receiver. It is at the highest certified power level, the well below the maximum value. This is power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The FCC has granted an Equipment Authorization for evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model the Display Grant section of http://www.fcc.gov/ oet/fccid after searching on FCC ID: ZO8JT600.